

TRANSPORTATION

Highlights

- ♦ There are approximately 1,631 miles of roads in Chesterfield County. Approximately 490 miles of these are “major” roads, not including 17 miles of interstate highways. There are 1,124 miles of local and subdivision streets.
- ♦ In 2000, 137 miles of major roads (28 percent) were operating at an unacceptable level of service (“E” or “F”).
- ♦ By 2018, an estimated 164 miles of major roads (33 percent) will be operating at unacceptable levels of service, even assuming anticipated road improvements.
- ♦ There are 67 miles of unsafe secondary roads in the county – roads that have no shoulders, 20 feet or less pavement width, and carry more than 4,000 vehicles a day.

Existing Facilities

There are approximately 1,631 miles of roads in Chesterfield County, as follows:

Classification	Examples	Total Length
Interstate Highways	I-95 and I-295	17 miles
Primary Roads	Routes 10, 60, and 360	126 miles
Secondary Roads	Courthouse, Genito, Robious	364 miles
Local/Subdivision Roads	Various internal subdivision roads	1,124 miles

Most county roads are in the state highway system, and are maintained by the Virginia Department of Transportation (VDOT). However, there are approximately 15 miles of unimproved state maintained roads in the county. These roads are typically short segments without sufficient traffic to warrant state improvement. Approximately 72 miles of roads/rights-of-way in the county are not maintained by VDOT. These include private roads, unimproved rights-of-way, and a limited number of county roads.

Thoroughfare Plan

The Board of Supervisors adopted the Thoroughfare Plan in 1989. The Thoroughfare Plan shows right-of-way classifications of existing roads, and the right-of-way classifications and general alignments of proposed roads. It represents the road network that should be in place at the theoretical build-out horizon of the county. The Board of Supervisors must adopt any revisions to this plan. The Transportation Plan, in contrast, is an internal working document primarily used by the Transportation Department as a guide for evaluating development proposals. This document is not tied to a specific time horizon.

Level of Service

The county has no adopted policy mandating a minimum level of service for the transportation network. Such a policy would probably be unrealistic and unachievable, due to significant road improvement costs that would be needed to improve existing system deficiencies and limited funding options. The Transportation Department periodically calculates current levels of service of major county roads. “Level of service” (LOS) is a traffic congestion measurement, based on the amount of road traffic relative to road design capacity. LOS may range from “A” (smooth traffic flow with no congestion) to “F” (high

traffic volumes with a significant level of congestion). For planning purposes, roads with LOS "E" or "F" are considered problematic and given higher priority for improvement planning. The mileage of major roads in the county operating at LOS "E" or "F" has been increasing over the past several years, even taking into account recent road improvements:

Year	Major Road Miles	Miles at LOS E or F	%
1986	462	85	18%
1996	489	129	26%
2000	490	137	28%
2018 (projected)	490	164	33%

Future Road Improvement Needs

The Transportation Department utilizes a traffic model to anticipate future road needs. The most recent model run projected traffic volumes for the year 2018, based on anticipated growth and development in the county and the region. Based on these projections, approximately 240 of the 490 miles of major roads in the county will be operating at LOS "E" or "F" by the year 2018. The following road improvements would be needed to improve roads operating at service levels "E" and "F" through the year 2018:

Widen roads to 8-lanes	14 miles
Widen roads to 6-lanes	57 miles
Widen roads to 4-lanes	23 miles
Improve 2-lane roads	138 miles
Shoulder improvements on 2-lane roads	8 miles
Total Needed Road Improvements	240 miles

Taking into account road improvements anticipated to be completed over this time frame, the Transportation Department estimates that there will still be approximately 164 miles of LOS "E" and "F" roads by the year 2018. This estimate is based on the working transportation model and average annual road improvement trends.

Road Development Process

County road improvements are provided by three different ways: in conjunction with development, by direct county action, and by state action.

In Conjunction With Development: Improvements realized in conjunction with development projects may include construction of Thoroughfare Plan roads, turn lanes at access locations, and traffic signals. These improvements may be accepted through the zoning process, in the form of proffers or conditions of approval, or as a part of development review (such as plan review of a new shopping center). In general, road improvements associated with a specific development project cover internal road networks (private drives and interior subdivision roads) and a portion of area wide road improvements needed to offset development impacts.

By Direct County Action: Improvements in this category typically include county paving projects of unimproved roads, and road shoulder improvement projects. These projects are

usually small in scope and funded by the CIP budget and/or grant funding sources. The county has also directly funded a few major road improvements by issuing bonds.

By State Action: Improvements to interstate, primary, and secondary roads are planned through the VDOT Six-Year Program (SYP). This program is reviewed and adopted annually by the Virginia Commonwealth Transportation Board. The SYP is developed with significant emphasis on regional road networks, and incorporates cooperative projects adopted in the Long Range Transportation Plans of the Richmond Area and Tri-Cities Metropolitan Planning Organizations. Funding for these major projects is mostly from State and federal sources. Project delivery is therefore subject to factors outside of county control, such as budgets or project delivery capabilities of other agencies.

Recent Projects: Several major road projects have been completed in the past several years that have helped mitigate increased traffic volumes resulting from growth in the county and surrounding areas. Examples of recent major road projects include:

- Route 288 completed as a 4-lane highway from I-95 to the Powhite Parkway
- Route 10 widened to 4-lanes from Chester to the Chippenham Parkway
- Route 360 widened to 6-lanes between Route 288 and Chippenham Parkway

The Transportation Department has administered a few county road projects to facilitate and expedite their completion. This function has been traditionally performed by VDOT.

Sidewalks

The county's approach to construction and maintenance of sidewalks has changed over the years. The county has primarily developed as a rural suburb of the Richmond Metro area. Since the county was less densely developed than urban areas, and cars have been the primary transportation mode, sidewalks were not routinely constructed. For this reason, most existing developed areas do not have sidewalks. In the late 1980's, county staff could require sidewalks where warranted in business as well as residential areas.

However, with continued growth the county has seen the need for sidewalks in certain circumstances and has developed a Sidewalk Policy. Since the late 1990's, the Policy has been applied when reviewing residential development proposals. The Policy requires construction of sidewalks along through roads in new subdivisions, within a certain distance of commercial areas or public facilities. The Policy is consistent with VDOT requirements for sidewalks that can be maintained by the state. New sidewalks funded by the private sector are generally possible only in connection with new development subject to Policy requirements. The county has also been able to construct sidewalks in a few existing neighborhoods by utilizing the Federal Highway Administration/VDOT Enhancement Program. The funds for this statewide program are competitive and very limited.

Bikeway Plan

The Board of Supervisors adopted the County Bikeway Plan in 1989. The Bikeway Plan is a component part of the Comprehensive Plan, and identifies routes where bikeway facilities should be provided. This plan has been used in considering development proposals and in

designing public road improvement projects. More information on the Bikeway Plan may be obtained from the Transportation Department.

Public Transportation: Background/Analysis

The Greater Richmond Transit Company (GRTC) provides limited van/bus service along selected roads in Chesterfield County. The goal of the van/bus service, known as "Chesterfield LINK," is to connect people with jobs, provide transportation for the elderly, and to provide transportation to medical facilities. LINK routes were located in an effort to reach the highest concentration of residents likely to use the service. Long-term funding and future operations of LINK service is unclear. Petersburg Area Transit (PAT) also provides limited service to Ettrick and to the Chester campus of John Tyler Community College.